MARINE RECREATIONAL INFORMATION PROGRAM

FY Project Plan

Review and Assessment of Methodologies Used to Estimate Recreational Fishing Participation

Created on

1. Overview

1.1. Background

The MRFSS estimator of the number of anglers participating in marine recreational fishing is based on the MRFSS estimator of total fishing effort and a secondary MRFSS Access Point Intercept Survey estimator of mean angler avidity. The number of participants is estimated by dividing the APIS estimate of mean avidity (mean number of fishing days per angler) into the MRFSS estimate of total fishing effort (total number of angler fishing days).

The NRC Report stressed the importance of testing the various assumptions that are made in the current estimation procedures used for the MRFSS and the other current recreational fishery surveys. The Report concluded that “unknown biases in the estimators from these surveys arise from reliance on unverified assumptions. Unless these assumptions are tested and the degree and direction of bias reliably estimated, the extent to which the biases affect final estimates will remain unknown.” The NRC Report also stated that “it is impossible to assess the adequacy of recreational fishing surveys, particularly those associated with the MRFSS, when potential biases exist. Identifying and eliminating the sources of bias or estimating and correcting for the degree of bias is a fundamental requirement for the provision of reliable estimates from the MRFSS.”

1.2. Project Description

This proposal requests the funding that is needed to support the first phase of a two-phase project that will develop improved sampling and estimation methods for the annual assessment of marine recreational fishing participation in all states.

The first phase of the project will focus on the evaluation of possible sources of bias in the current MRFSS estimator of participation and the development of a revised MRFSS estimator that is maximally unbiased.

The second phase of this project will compare the revised MRFSS approach with a wide variety of alternative survey designs that may be able to provide more accurate estimates of MRF participation in future years. In that effort, consideration would be given to other current surveys designs, as well as possible new survey designs.

Developing reliable, unbiased estimators of the total numbers of marine recreational fishing participants in each state will greatly improve our assessments of the fishing community, as well as our assessments of the possible economic and sociocultural impacts that changes in fishing regulations may have.

1.3. Objectives

1.4. References

2. Methodology

2.1. Methodology

2.2. Regions

2.3. Geographic Coverage

2.4. Temporal Coverage

2.5. Frequency

2.6. Unit of Analysis

2.7. Collection Mode

3. Communications Plan

3.1. Internal

3.2. External

4. Assumptions and Constraints

4.1. New Data

4.2. Track Costs

4.3. Funding Vehicle

ST Consultant Contract

4.4. Data Resources

4.5. Other Resources

Two of the expert consultants who are already supporting other MRIP project teams have expressed interest in supporting this project. Dr. Mike Brick (Westat) is already supporting a project being conducted by the License Frame Surveys Work Group. Dr. Jean Opsomer (Colorado State Univ.) is already supporting other Sampling and Estimation Work Group projects. With the experience that these two consultants have already gained on developing improvements in our current MRFSS sampling and estimation methods, they will be well-suited to evaluating the current MRFSS estimation procedures for participation. Dr. Brick has been helping to evaluate the current Coastal Household Telephone Survey (CHTS) of the MRFSS, and Dr. Opsomer has been helping to evaluate and improve the estimation procedures for the current Access Point Intercept Survey (APIS) of the MRFSS. The MRFSS participation estimates depend on data collected by both the CHTS and the APIS. In order to fully evaluate and improve the estimation methods currently used for participation, expertise will be needed to evaluate the estimation methods used in both of the component surveys.

4.6. Regulations

4.7. Other

It is assumed that the ongoing Sampling and Estimation Work Group project to develop improved estimation methods for the current MRFSS Access Point Intercept Survey (APIS) will be

completed prior to the start of this project. The improved APIS estimation methods will be used as a basis for evaluating and eliminating potential bias in the current APIS estimation of mean 12-month angler avidity.

It is also assumed that ongoing pilot studies being conducted by the License Frame Surveys Work Group will be provide measures of biases due to undercoverage or nonresponse in the current MRFSS Coastal Household Telephone Survey (CHTS). Any measurable bias in the CHTS estimates of total fishing effort would also have impact on the MRFSS estimates of participation. This project would attempt to take advantage of those ongoing studies and would not develop redundant pilot studies to assess potential biases in the MRFSS CHTS.

5. Risk

5.1. Project Risk

Table 1: Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach

6. Final Deliverables

6.1. Additional Reports

6.2. New Data Sets

Improved estimator of the total numbers of marine recreational fishing participants

6.3. New Systems

7. Project Leadership

7.1. Project Leader and Members

Table 2: Project Members

Project Role	Name	Organization	Title

8. Project Estimates

8.1. Project Schedule

Table 3: Project Schedule - Major Tasks and Milestones

#	Schedule Description	Planned Start	Planned Finish	Prerequisites	Milestones

8.2. Cost Estimates

Table 4: Cost Estimates

Project Need	Cost Description	Date Needed	Estimated Cost
TOTAL			$0.00